CLAIM AMENDMENTS   10/593142

UNDER 37 CFR 1.121(c)

1. (Original) A shopping pattern analyzing system

    comprising:

    a tag attached to a shopping cart and having mobility

    corresponding to a shopping consumer;

    a plurality of readers for reading information of the

    tag through local area radio communication and

    transmitting the read information through a network;

    an analysis module for analyzing a shopping pattern of

    the consumer from the information of the tag read by

    the readers;

    a database in which the information of the tag and

    analysis data of the analysis module are stored;

    a system server for managing the analysis data of the

    analysis module by performing communication with the

    readers, and controlling the analysis module and the

    database; and

    a monitoring terminal for receiving a result of the

    analysis for the shopping pattern from the system

    server and displaying the received result of the

    analysis.

2. (Original) The shopping pattern analyzing system
    according to claim 1, further comprising a
    wired/wireless terminal installed at an entrance and
    exit spot of a store for identifying a card on which
    consumer information is recorded,
    wherein the shopping pattern analyzing system manages
    a shopping profile of the consumer using a combination
    of the consumer information and the tag information.

3. (Original) The shopping pattern analyzing system
    according to claim 2, further comprising a consumer
    terminal for receiving information on a shopping
    expectation zone of the consumer and information on
    goods of interest in a relevant zone, which are
    analyzed by the analysis module.

4. (Original) The shopping pattern analyzing system
    according to claim 1, further comprising a plurality
    of POS terminals for settling goods shopped by the
    consumer,
    wherein the shopping pattern analyzing system manages
    a shopping profile of the consumer using a combination

of the consumer information and the tag information, which are used for settlement.

5.   (Original) The shopping pattern analyzing system according to claim 1, wherein the analysis module includes:

a consumer location detecting unit for detecting a location of the consumer in a store corresponding to a location of the tag according to a signal from the tag sensed by the readers and storing information on the detected location of the consumer in the database;

a shopping time checking unit for checking a term during which the consumer stays in the detected location in the store, determines the term as stay shopping time in a relevant zone if the consumer stays in the relevant zone for preset threshold time, and storing the stay shopping time in the database; and

a shopping traffic line tracing unit for tracing a shopping traffic line of the consumer in association of the consumer location information and the stay shopping time information in the relevant zone and storing the shopping traffic line information in the database.

6.   (Original) The shopping pattern analyzing system

according to claim 5, wherein the analysis module

further includes:

a preference zone analyzing unit for calculating

preference of the relevant zone using stay shopping

time of the consumer for each zone and shopping

information on goods in the relevant zone and storing

the calculated preference in database; and

a shopping pattern analyzing unit for analyzing

profile information of the consumer, shopping

particulars of the consumer, and the shopping traffic

line information, which are stored in the database,

grouping the shopping pattern of the consumer for each

item of the consumer profile, inferring shopping

patterns for different consumers having similar

profile information, and storing a result of the

inference in the database.

7.   (Original) The shopping pattern analyzing system

according to claim 5, wherein the analysis module

includes:

a shopping profile analyzing unit for generating or

updating a shopping profile of the consumer with

reference to the consumer information and shopping

history of the consumer and shopping history of a

consumer group related to the consumer, which are

stored in the database, analyzing the generated or

updated shopping profile, and storing a result of the

analysis in the database; and

a potential information predicting unit for providing

goods recommendation information individualized with

reference to goods shopping particulars of the

consumer, the shopping traffic line information, the

shopping profile, and zone preference, which are

stored in the database, to a consumer terminal carried

by the consumer.

8.   (Original) The shopping pattern analyzing system

according to claim 5, wherein the threshold time is

calculated by subtracting an average of moving time of

the consumer in the relevant zone from an average of

stay shopping time for each relevant zone, and is

defined between maximal stay shopping time and minimal

stay shopping time, which are spent in each zone when

relevant zone goods are shopped actually.

9.   (Original) The shopping pattern analyzing system

according to claim 5, wherein the shopping traffic

line information is grouped for each profile of the

consumer, and the grouped shopping traffic line

information is stored in the database.

10. (Original) The shopping pattern analyzing system

according to claim 6, wherein the preference of the

relevant zone is calculated by multiplying a ratio of

the number of goods shopped in a certain zone in the

store to the number of goods shopped in all zones in

the store by a ratio of stay shopping time of the

consumer for each zone to total shopping time of the

consumer, and is corrected using a shopping goods

weight and a shopping time weight.

11. (Original) The shopping pattern analyzing system

according to claim 10, wherein the shopping goods

weight is calculated by a radio of the quantity of

goods shopping in the relevant zone during a specified

term including a final point of time of shopping for

goods that have ever been shopped in the store to the

overall quantity of goods shopping in the relevant

zone.

12.   (Original) The shopping pattern analyzing system according to claim 10, wherein the shopping time weight is calculated by a radio of goods shopping time in the relevant zone during a specified term including a final point of time of shopping to overall goods shopping time in the store during the specified term including the final point of time of shopping.

13.   (Currently Amended) The shopping pattern analyzing system according to claim 5, [[any one of claims 5 to 12,]] wherein the shopping traffic line tracing unit traces and analyzes shopping traffic lines of individual consumers and hourly, daily and monthly shopping traffic lines of all consumers, and displays a result of the analysis through the monitoring terminal.

14.   (Currently Amended) The shopping pattern analyzing system according to claim 5, [[any one of claims 5 to 12,]] wherein the shopping traffic line tracing unit analyzes shopping congestion in each zone in the store and displays the analyzed shopping congestion through the monitoring terminal.

15. (Currently Amended) The shopping pattern analyzing system according to claim 5, [[any one of claims 5 to 12,]] wherein information on the shopping traffic line and the shopping pattern of the consumer is calculated and analyzed, and a result of the analysis is displayed as a graph and quantitative real data values through the monitoring terminal.

16. (Original) A shopping pattern analyzing method comprising the steps of:

detecting a location of a consumer in a store corresponding to a location of a tag according to a signal from the tag sensed by a reader and storing information on the detected location of the consumer in a database;

checking stay shopping time in a relevant zone in which the location of the consumer is detected and storing the checked stay shopping time in the database;

tracing a shopping traffic line of the consumer in association of the consumer location information and the zone in which the stay shopping time is generated and storing the traced shopping traffic line information in the database;

analyzing zone preference of the consumer from the
stay shopping time information and goods information,
which are stored in the database, and storing the
analyzed preference in database;

analyzing a shopping pattern of the consumer from the
shopping traffic line information, the stay shopping
time information, and the goods information, which are
stored in the database, and storing a result of the
analysis in the database; and

generating or updating shopping profile information of
the consumer and storing the generated or updated
shopping profile information in the database.

17. (Original) The shopping pattern analyzing method
according to claim 16, wherein the stay shopping time
is determined to be stay shopping time in a certain
the relevant zone if it is checked whether a term
during which the consumer stays in the certain zone
exceeds preset threshold time.

18. (Original) The shopping pattern analyzing method
according to claim 17, wherein the threshold time is
calculated by subtracting an average of moving time of
the consumer in the relevant zone from an average of

stay shopping time for each relevant zone, and is
defined between maximal stay shopping time and minimal
stay shopping time, which are spent in each zone when
relevant zone goods are shopped actually.

19. (Original) The shopping pattern analyzing method
according to claim 16, wherein the zone preference is
calculated by multiplying a ratio of the number of
goods shopped in a certain zone in the store to the
number of goods shopped in all zones in the store by a
ratio of stay shopping time of the consumer for each
zone to total shopping time of the consumer, and is
corrected using a shopping goods weight and a shopping
time weight.

20. (Original) The shopping pattern analyzing method
according to claim 19, wherein the shopping goods
weight is calculated by a radio of the quantity of
goods shopping in the relevant zone during a specified
term including a final point of time of shopping for
goods that have ever been shopped in the store to the
overall quantity of goods shopping in the relevant
zone.

21. (Original) The shopping pattern analyzing method according to claim 19, wherein the shopping time weight is calculated by a radio of goods shopping time in the relevant zone during a specified term including a final point of time of shopping to overall goods shopping time in the store during the specified term including the final point of time of shopping.

22. (Original) A shopping pattern analyzing method comprising the steps of:

registering consumer information in a database when a consumer enters a store;

detecting a location of the consumer in the store corresponding to a location of a tag according to a signal from the tag sensed by a reader and storing information on the detected location of the consumer in the database;

determining whether or not stay shopping time of the consumer in a certain zone in the store exceeds preset threshold time;

searching for a shopping profile of the consumer stored in the database if it is determined that the stay shopping time exceeds the preset threshold time;

determining whether or not a current stay shopping
zone is included in the shopping profile of the
consumer;

selecting a preference zone of the consumer from the
shopping profile information of the consumer if it is
determined that the current stay shopping zone is
included in the shopping profile of the consumer;

transmitting information on the preference zone and
information on goods of interest of the consumer in
the preference zone to a consumer terminal; and

adding information on a relevant moving zone to the
shopping profile of the consumer stored in the
database.

23.   (Original) The shopping pattern analyzing method
according to claim 22, wherein the registration of the
consumer information is achieved by a wired/wireless
terminal installed at an entrance and exit spot of the
store for identifying a card on which the consumer
information is recorded in a contact or non-contact
manner.

24.   (Original) The shopping pattern analyzing method
according to claim 22, wherein the threshold time is

calculated by subtracting an average of moving time of the consumer in the relevant zone from an average of stay shopping time for each relevant zone, and is defined between maximal stay shopping time and minimal stay shopping time, which are spent in each zone when relevant zone goods are shopped actually.